

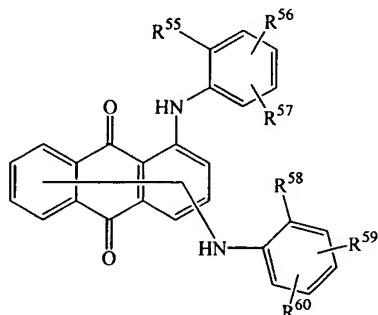
IN THE CLAIMS

1. A thermoplastic resin composition for laser welding comprising:

- 1) thermoplastic resin; and,
- 2) a laser beam transmitting black colorant comprising neutral anthraquinone dye of formula [I] or [II]

5 wherein formula [I] is

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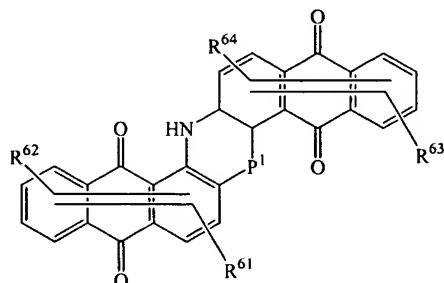
30 wherein R<sup>55</sup> and R<sup>58</sup>, which may be the same or different, are independently selected from alkyl groups having 1 to 18 carbon atoms; and R<sup>56</sup> and R<sup>59</sup>, which may be the same or different, are independently selected from the group consisting of alkyl, aryl, alkenyl, alkoxy, amino, N-alkylamide, N-arylamide, acyl, acylamide, alkoxycarbonyl, hydroxy, and carboxy groups and halogen atom; and R<sup>57</sup> and R<sup>60</sup>, which may be the

35 same or different, are independently selected from the group consisting of H, alkyl, aryl, alkenyl, alkoxy, amino, N-alkylamide, N-arylamide, acyl, acylamide, carboxy, alkoxycarbonyl, and hydroxy groups and halogen atom,

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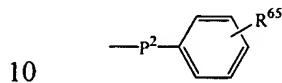
and wherein formula [II] is

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wherein R<sup>61</sup>, R<sup>62</sup>, R<sup>63</sup>, and R<sup>64</sup>, which may be the same or different, are independently selected from the group consisting of H, alkyl, alkenyl, aryl, alkoxy, amino, N-alkylamide, N-arylamide, acyl, acylamide, carboxy, alkoxy carbonyl, hydroxy group, halogen atom, formula [II-a], and P<sup>1</sup> is NR<sup>66</sup> or CO, wherein R<sup>66</sup> is H, alkyl, or aryl groups.

5 formula [II-a] is:



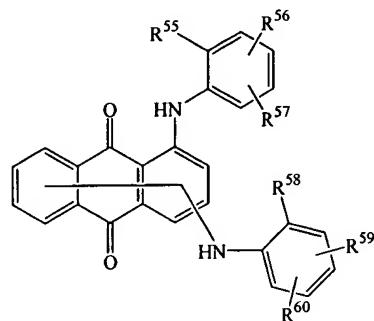
wherein P<sup>2</sup> is NH or NHCO; R<sup>65</sup> is H, alkyl, aryl, alkoxy, amino, hydroxy, or halogen atom.

- 15 2. The composition of Claim 1 wherein the thermoplastic resin is polyamide or polyester.
- 3. The composition of Claim 1 further comprising a second dye mixed with said neutral anthraquinone dye to produce said black colorant.
- 4. The composition of Claim 3 wherein said second dye is selected from the group consisting of perinone dyes, monoazo complex dyes, and anthraquinone dyes.
- 20 5. The composition of Claim 1 further comprising reinforcing agent.
- 6. A transparent article formed from the composition of Claim 1.
- 7. An article formed by laser welding opaque articles with the transparent article of Claim 5.
- 25 8. A black colorant suitable for being mixed with a thermoplastic resin and for laser welding, comprising a mixture of neutral anthraquinone dye of formula [I] or [II] which imparts color of blue, absorbs visible light with wavelength less than 700 nm and transmit a laser beam with wavelength at 800 nm to 1200 nm in infra-red region with at least one other red dye which transmits the laser beam with wavelength at 800 nm to 1200 nm in infra-red region.
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formula [I] is ;

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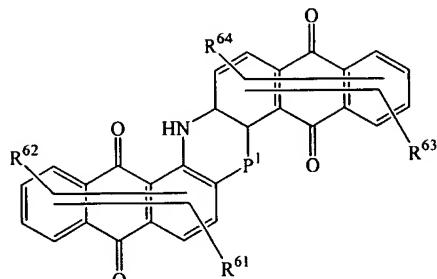
wherein R<sup>55</sup> and R<sup>58</sup>, which may be the same or different, are independently selected from alkyl groups having 1 to 18 carbon atoms; and R<sup>56</sup> and R<sup>59</sup>, which may be the same or different, are independently selected from the group consisting of alkyl, aryl, alkenyl, alkoxy, amino, N-alkylamide, N-arylamide, acyl, acylamide, alkoxycarbonyl, hydroxy, and carboxy groups and halogen atom; and R<sup>57</sup> and R<sup>60</sup>, which may be the same or different, are independently selected from the group consisting of H, alkyl, aryl, alkenyl, alkoxy, amino, N-alkylamide, N-arylamide, acyl, acylamide, carboxy, alkoxycarbonyl, and hydroxy groups and halogen atom,

and

35 formula [II] is ;

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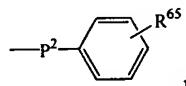


wherein R<sup>61</sup>, R<sup>62</sup>, R<sup>63</sup>, and R<sup>64</sup>, which may be the same or different, are independently selected from the group consisting of H, alkyl, alkenyl, aryl, alkoxy, amino, N-alkylamide, N-arylamide, acyl, acylamide, carboxy, alkoxycarbonyl, hydroxy group, halogen atom, formula [II-a], and P<sup>1</sup> is NR<sup>66</sup> or CO, wherein R<sup>66</sup> is H, alkyl, or aryl

groups.

formula [II-a] is:

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wherein P<sup>2</sup> is NH or NHCO; R<sup>65</sup> is H, alkyl, aryl, alkoxy, amino,

10 hydroxy, or halogen atom.